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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/761,216

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Kuen-Huei Chang

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2753

7590

02/23/2005

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EXAMINER

TRA, ANH QUAN

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/761,216

Applicant(s)

CHANG ET AL.

Examiner

Quan Tra

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 13-17 and 21-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species of the claimed invention: group I, claims 1-12 and 18-20, corresponding to figure 3A; and group II, claims 13-17 and 21-24, corresponding to figure 4A.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

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examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Richard V. Burgujian on February 1, 2005 a provisional election was made without traverse to prosecute the invention of group I, claims 1-12 and 18-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-17 and 21-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-11 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ooishi (USP 6271710).

As to claim 1, Ooishi discloses in figure 4 a circuit for generating a current, comprising: a first current generator (transistor 246 and circuit 23) providing a constant current (at the drain of transistor 246) in response to a constant voltage (output of circuit 20); a voltage generator

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(211-217 and R1, R2) providing a temperature dependent voltage (at the gate of transistor 218); and a second current generator (218-220) coupled to the voltage generator providing a variable current in response to the temperature dependent voltage.

As to claim 2, figure 4 shows that the voltage generator includes a resistor (R2) having a temperature dependent resistance.

As to claim 3, figure 4 shows that the voltage generator includes a current source (212), a temperature dependent resistor (R2) coupled to the current source, and an output terminal disposed between the current source and the resistor.

As to claim 4, figure 4 shows that the temperature dependent resistance of the resistor increases as the temperature increases, and decreases as the temperature decreases.

As to claim 5, figure 4 shows that the second current generator includes a transistor (218) having a gate coupled to the output terminal.

As to claim 6, figure 4 shows a circuit for generating a temperature dependent current, comprising: a voltage generator (211-217 and R1, R2) providing a temperature dependent voltage; a current source (212) of the voltage generator providing a constant current; a resistor (R2) of the voltage generator having a temperature dependent resistance; an output terminal of the voltage generator disposed between the current source and the resistor; and a current generator including a transistor (218) having a gate coupled to the output terminal, the current generator providing a current in response to the temperature dependent voltage.

As to claim 7, figure 4 show that the temperature dependent resistance increases as an operation temperature increases, and decreases as an operation temperature decreases.

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As to claim 8, figure 4 shows a circuit comprising: a first current generator (246 and circuit 23) providing a first current in response to a constant voltage (output of circuit 20), a voltage generator (211-217, R1 and R2) providing a temperature dependent voltage; a second current generator (218-220) providing a second current in response to the temperature dependent voltage; and a frequency generator (oscillator 30 in figure 3) providing a frequency in response to the sum of the first and second currents.

As to claim 9, figure 4 shows that the voltage generator includes a current source (212), a resistor (R2) having a temperature dependent resistance, and an output terminal coupled between the current source and the resistor.

As to claim 10, figure 4 shows that the second current generator includes a transistor (218) having a gate coupled to the output terminal.

As to claim 11, figure 4 shows that the second current is turned off at a predetermined temperature (at a predetermined temperature, the resistance of resistor R2 decreases to a value that all current from 212 will go through transistor 214 and R2, and there is no current going through transistors 217. Transistors 218-220 will be turned off).

As to claim 18, figure 4 shows a comprising: providing a constant voltage (output of 202); generating a first current (246) in response to the constant voltage; providing a temperature dependent resistance (R2), generating a temperature dependent voltage (at gate of 218) by flowing a constant current ( $I_{ref}$ ) through the resistor, generating a second current (output of 218-220) in response to the temperature dependent voltage, and generating a frequency in response to the sum of the first and second currents.

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As to claim 19, figure 4 shows the step increasing the temperature dependent resistance as an operation temperature increases.

As to claim 20, figure 4 shows the step of turning off the second current when temperature falls below a predetermined point (at a predetermined temperature range, the resistance of resistor R2 decreases to a value that all current from 212 will go through transistor 214 and R2, and there is no current going through transistors 217. Transistors 218-220 will be turned off).

#### ***Allowable Subject Matter***

6. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 12 would be allowable because the prior art fails to teach or suggest that the frequency generator includes a comparator and a capacitor.

#### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are cited as interest because they show some circuits analogous to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan Tra whose telephone number is 571-272-1755. The examiner can normally be reached on 8:00 A.M.-5:00 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Quan Tra', with a long horizontal flourish extending to the right.

Quan Tra  
Primary Examiner

February 07, 2005